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**Memorandum**

**To:** LaDonna Turner, Site Assessment Manager  
Technical and Enforcement Branch  
U.S. Environmental Protection Agency, Region 6

**From:** Dana Bahar, Manager, Superfund Oversight Section  
Ground Water Quality Bureau, New Mexico Environment Department.

**Date:** September 10, 2009

**Subject:** Pre-CERCLIS Screening Assessment of Section 25 Open Pits Mine,  
McKinley County, New Mexico: Further action under CERCLA  
recommended

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<b>Site name</b>	Section 25 Open Pits Mine				
<b>City</b>	not applicable	<b>State</b>	New Mexico	<b>Zip code</b>	not applicable
<b>County</b>	McKinley				
<b>Latitude</b>	35° 19' 58.00"	<b>Longitude</b>	107° 51' 06.61"		

**Site physical description:** The Section 25 Open Pits Mine currently is an area of excavated pits and trenches, and includes an adit that has been excavated into the side of one pit. A residence recently has been built on part of the site.

**Site identification:** Potential alluvial ground water contamination within the Grants Mineral Belt was identified because background standards established for the contaminants of concern for ongoing remedial action associated with the Homestake Mining Company NPL site (CERCLIS NMD0007860935) are generally higher than Maximum Contaminant Levels (MCLs). NMED conducted sampling of private residential wells in subdivisions located in the vicinity of the HMC site, and found that the majority had one or more contaminant concentrations exceeding MCLs.

**Site summary:** Observations made during NMED's Site reconnaissance are shown on the accompanying figures. Most of the currently-visible land disturbances lie to the south of the residence; it is not known if the mining disturbance originally extended under residence. A bulldozer cut into limestone south of the residence is now used as a trash dump, and has slightly-elevated radioactivity, which may be due partly to "shine" effect within the excavation (142 counts per second (cps); background=40 cps). Radioactivity at a stock tank, which was created at the end of the drainage formed by the bulldozer cut, measured 177 cps. The highest radioactivity measured during the site reconnaissance was 558 cps at a waste rock pile cut by a drainage. The entire area borders a large surface water drainage that may have been created by mining activity. Contamination of vicinity soils and surface drainages by precipitative erosion and wind dispersion

comprise the primary contaminant pathways that may be associated with this site. Additionally, site runoff of contaminated wastes may impact ground water quality either through seepage through alluvium or by direct entry to the subsurface via the open adit.

**Targets:** The closest residence to the Site is just to the north of evident mine-related surface disturbance. The occupant of this residence hauls water from Milan for residential use because ground water is reportedly deep at this location. Other residences are located approximately 0.4 miles southwest of the site and 1.4 miles to the west. Residences also are located near the junction of State Hwy. 605 and 509, approximately 4.1 air-miles northeast of the Site. Other potential targets may include cattle and wildlife.

Closest well sampled to date: livestock well SMC-22 (1.5 air-miles; 48.2 µg/l total uranium in 2009 sampling).

**Site ownership and Potentially Responsible Parties:** Surface rights for some of the site are held by Chaffin; the rest is said by Chaffin to be held by Berryhill Ranch. Newmont Mining Company may still hold the mineral rights. Amiran Company Ltd. and Reserve Oil and Minerals Company reportedly last operated the mine in 1981.

**File review:** NMED staff reviewed the following files:

- Database compiled by Mining and Minerals Division of the New Mexico Energy, Minerals, and Natural Resources Department (07/20/2007).
- Anderson, Orin J., 1980. "Abandoned or inactive uranium mines in New Mexico".
- McLemore, Virginia T. and William L. Chenoweth, 1991. "Uranium mines and deposits in the Grants district, Cibola and McKinley Counties, New Mexico." New Mexico Bureau of Mines and Mineral Resources Open-file report 353.
- Rappaport, Linda, "Uranium deposits of the Poison Canyon ore trend, Grants District," in "Geology and technology of the Grants Uranium Region, 1963. State Bureau of Mines and Mineral Resources.
- U.S. Geological Survey, 1997. "Gallup quadrangle NURE HSSR study." OFR-97-492.

**Site reconnaissance:** NMED staff conducted a Site reconnaissance on July 2, 2009.

**Recommendation:** A release of CERCLA hazardous substances has been documented at the site. NMED recommends further investigation under CERCLA to assess the risk posed by the site using the Hazard Ranking System.

NMED recommends that the investigation include the following:

1. Sample sediments along drainages to characterize extent of Site-derived waste dispersion.
2. Investigate and characterize surface water accumulations and ground water impacts.

In addition NMED recommends the following actions be performed to address immediate threats to public health and the environment:

1. Remove waste with elevated radioactivity.
2. Close open adit
3. Assess on-Site residence and associated residence for radiological contamination.

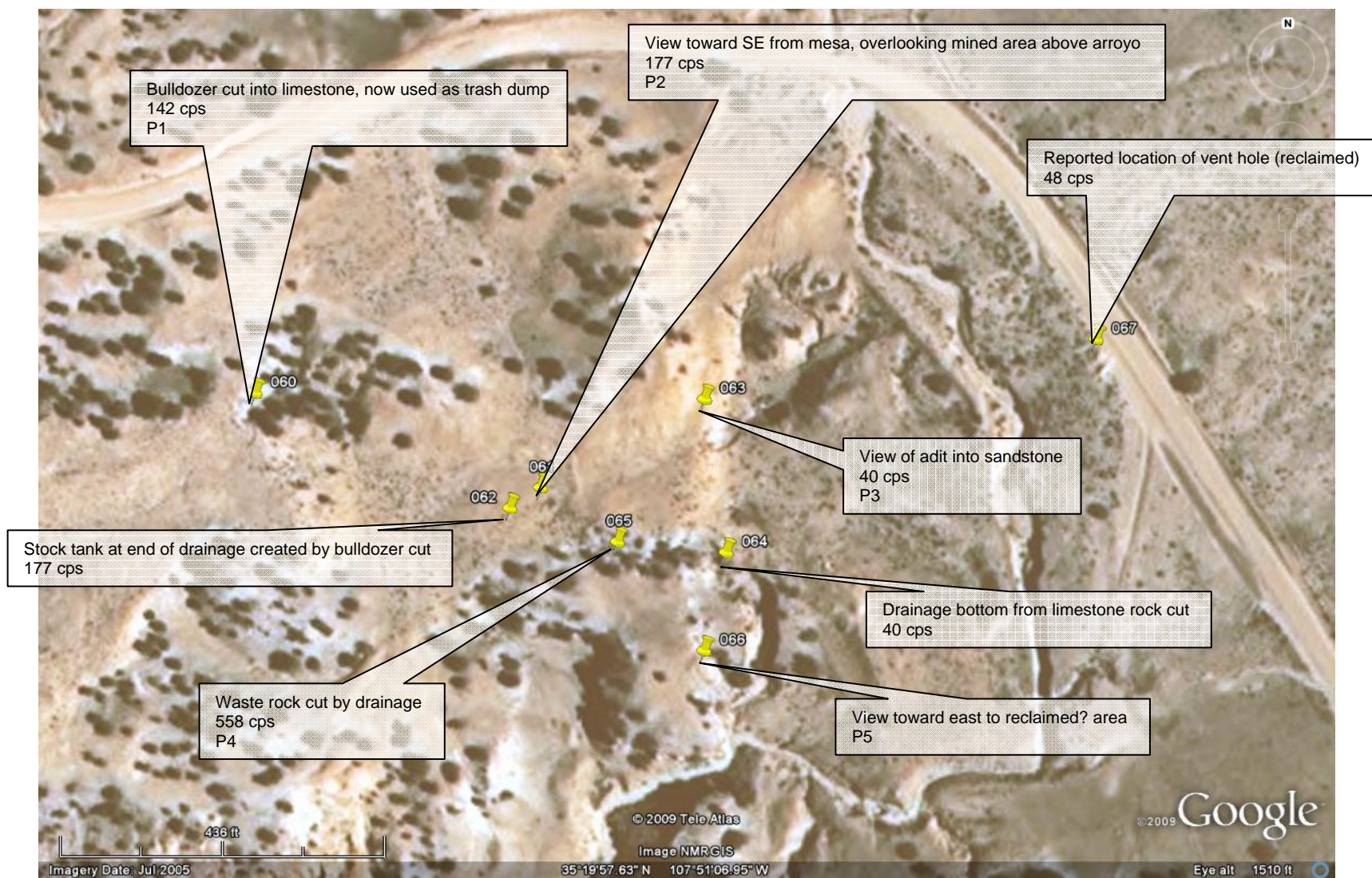


Figure 1: Section 25 Open Pit—measurements taken on July 2, 2009

"Px" reference the location of photographs on pages following.





P1: Section 25 open pit bulldozer cut into limestone, now used as trash dump



P2: Section 25 open pit view toward SE from mesa, overlooking mined area above arroyo



P3: Section 25 open pit view of adit into sandstone



P4: Section 25 open pit waste rock cut by drainage

Ms. LaDonna Turner, EPA Region 6 Site Assessment Manager  
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P5: Section 25 open pit view toward east to reclaimed? area